

Application Number 10/696,491

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claim 1 (Original): A method comprising:

sequentially displaying a plurality of two-dimensional body templates, each of the body templates illustrating a view of an external surface of a human body rotated an angle about an axis;

receiving input from a user indicating a region of one of the body templates;

mapping the input to a body surface coordinate system that describes a plurality of points on the external surface of the human body;

regenerating the body template to illustrate the indicated region on the template based on the body surface coordinate system with the mapped input; and

displaying the regenerated body template.

Claim 2 (Original): The method of claim 1, wherein the plurality of body templates comprises a front view template and a back view template.

Claim 3 (Original): The method of claim 1, wherein the plurality of body templates comprises a front view template, a right-side view template, a back view template, and a left-side view template.

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Claim 4 (Original): The method of claim 1, wherein the regenerated body template is a first one of the body templates that illustrates a portion of the surface, the method further comprising: generating a second one of the body templates to illustrate at least some of the portion of the surface illustrated by the first one of the body templates and at least a portion of the region indicated by the user based on the body surface coordinate system with the mapped input; and displaying the second one of the body templates.

Claim 5 (Currently Amended): The method of claim 1, wherein sequentially displaying the body templates comprises sequentially displaying the body templates according to commands received from a the user.

Claim 6 (Currently Amended): The method of claim 5, wherein sequentially displaying the body templates according to commands received from a the user comprises displaying the body templates according to commands received via at least one direction arrow.

Claim 7 (Currently Amended): The method of claim 5, wherein sequentially displaying the body templates according to commands received from a the user user comprises:

- displaying a first one of body templates;
- receiving a command from the user;
- generating a second one of the body templates in response to the command; and
- displaying the second one of the body templates.

Claim 8 (Cancelled).

Claim 9 (Original): The method of claim 1, wherein sequentially displaying the body templates comprises sequentially displaying the body templates via a display, and receiving input from a user comprises receiving input from the user via the display.

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Claim 10 (Currently Amended): The method of claim 1, wherein sequentially displaying the body templates comprises:

displaying a first one of the body templates;

generating a second one of the body templates to illustrate a view of the external surface of the human body, wherein the angle of rotation of the surface about the axis is based on the a proximity of the received body region indication to an edge of the first one of the body templates; and

displaying the second one of the body templates.

Claim 11 (Original): The method of claim 1, wherein the input comprises a two-dimensional polygon outline of the indicated region.

Claim 12 (Cancelled).

Claim 13 (Original): The method of claim 1, further comprising generating each of the body templates based on the body surface coordinate system.

Claim 14 (Original): The method of claim 1, wherein the body surface coordinate system comprises a three-dimensional coordinate system.

Claim 15 (Original): The method of claim 14, further comprising generating the three-dimensional coordinate system by applying one of a linear interpolation, a higher-order interpolation, or a spline technique to determine valid body coordinates.

Claim 16 (Original): The method of claim 14, wherein mapping the input into a three-dimensional body surface coordinate system comprises assigning a third coordinate to each point of the indicated region of the body template.

Claim 17 (Original): The method of claim 1, wherein the body surface coordinate system comprises a two-dimensional coordinate system.

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Claim 18 (Original): The method of claim 17, further comprising generating the two-dimensional coordinate system by mathematically peeling and flattening a representation of the external surface of the human body, and indicating continuity at edges of the body surface.

Claim 19 (Original): The method of claim 17, wherein displaying the regenerated body template comprises projecting the two-dimensional coordinate system onto a three-dimensional frame representation of the external surface of the human body.

Claim 20 (Cancelled).

Claim 21 (Original): The method of claim 1, wherein regenerating the one of the body templates to illustrate the indicated region on the template comprises regenerating the one of the body templates to include shading of the indicated region on the template.

Claim 22 (Original): The method of claim 1, wherein the body region indication indicates a region of at least one of pain or paresthesia experienced by a patient.

Claim 23 (Original): The method of claim 1, wherein the user comprises one of a patient or a clinician.

Claim 24 (Original): The method of claim 1, wherein the axis comprises a vertical axis through a center of the body.

Claim 25 (Original): The method of claim 1, wherein each of the body templates illustrates a view of the external surface of the human body rotated an angle about at least one of a plurality of axes.

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Claim 26 (Original): A computer-readable storage medium storing instructions that cause a programmable processor to:

sequentially display a plurality of two-dimensional body templates, each of the body templates illustrating a view of an external surface of a human body rotated an angle about an axis;

receive input from a user indicating a region of one of the body templates;

map the input to a body surface coordinate system that describes a plurality of points on the external surface of the human body;

regenerate the one of the body templates to illustrate the indicated region on the template based on the body surface coordinate system with the mapped input; and

display the regenerated body template.

Claim 27 (Original): The computer-readable storage medium of claim 26, wherein the plurality of body templates comprises a front view template and a back view template.

Claim 28 (Original): The computer-readable storage medium of claim 26, wherein the plurality of body templates comprises a front view template, a right-side view template, a back view template, and a left-side view template.

Claim 29 (Original): The computer-readable storage medium of claim 26, wherein the regenerated body template is a first one of the body templates that illustrates a portion of the surface, the computer-readable medium further comprising instructions that cause a programmable processor to:

generate a second one of the body templates to illustrate at least some of the portion of the surface illustrated by the first one of the body templates and at least a portion of the region indicated by the user based on the body surface coordinate system with the mapped input; and

display the second one of the body templates.

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Claim 30 (Currently Amended): The computer-readable storage medium of claim 26, wherein the instructions that cause a programmable processor to sequentially display the body templates comprise instructions that cause a programmable processor to display the body templates according to commands received from a the user.

Claim 31 (Currently Amended): The computer-readable storage medium of claim 30, wherein the instructions that cause a programmable processor to sequentially display the body templates according to commands received from a the user comprise instructions that cause a programmable processor to display the body templates according to commands received via at least one direction arrow.

Claim 32 (Currently Amended): The computer-readable storage medium of claim 30, wherein the instructions that cause a programmable processor to sequentially display the body templates according to commands received from a the user comprise instructions that cause a programmable processor to:

- display a first one of the body templates;
- receive a command from the user;
- generate a second one of the body templates according to the command; and
- display the second one of the body templates.

Claim 33 (Cancelled).

Claim 34 (Original): The computer-readable storage medium of claim 26, wherein the instructions that cause a programmable processor to sequentially display the body templates and receive input from a user comprise instructions that cause a programmable processor to sequentially display the body templates and receive the input via a display.

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Claim 35 (Currently Amended): The computer-readable storage medium of claim 26, wherein the instructions that cause a programmable processor to sequentially display the body templates comprise instructions that cause a programmable processor to:

display a first one of the body templates;

generate a second one of the body templates to illustrate a view of the external surface of the human body, wherein the angle of rotation of the surface about the axis is based on the a proximity of the received body region indication to an edge of the first one of the body templates; and

display the second one of the body templates.

Claim 36 (Original): The computer-readable storage medium of claim 26, wherein the input comprises a two-dimensional polygon outline of the indicated region.

Claim 37 (Cancelled).

Claim 38 (Original): The computer-readable storage medium of claim 26, further comprising instructions that cause a programmable processor to generate each of the body templates based on the body surface coordinate system.

Claim 39 (Original): The computer-readable storage medium of claim 26, wherein the body surface coordinate system comprises a three-dimensional coordinate system.

Claim 40 (Original): The computer-readable storage medium of claim 39, further comprising instructions that cause a programmable processor to generate the three-dimensional coordinate system by applying one of a linear interpolation, a higher-order interpolation, or a spline technique to determine valid body coordinates.

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Claim 41 (Original): The computer-readable storage medium of claim 26, wherein the instructions that cause a programmable processor to map the input into a three-dimensional body surface coordinate system comprise instructions that cause a programmable processor to assign a third coordinate to each point of the indicated region of the body template.

Claim 42 (Original): The computer-readable storage medium of claim 26, wherein the body surface coordinate system comprises a two-dimensional coordinate system.

Claim 43 (Original): The computer-readable storage medium of claim 42, further comprising instructions that cause a programmable processor to generate the two-dimensional coordinate system by mathematically peeling and flattening a representation of the external surface of the human body, and indicating continuity at edges of the body surface.

Claim 44 (Original): The computer-readable storage medium of claim 42, wherein the instructions that cause a programmable processor to display the regenerated body template comprise instructions that cause a programmable processor to project the two-dimensional coordinate system onto a three-dimensional frame representation of the external surface of the human body.

Claim 45 (Cancelled).

Claim 46 (Original): The computer-readable storage medium of claim 26, wherein the instructions that cause a programmable processor to regenerate the one of the body templates to illustrate the indicated region on the template comprise instructions that cause a programmable processor to regenerate the one of the body templates to include shading of the indicated region on the template.

Claim 47 (Cancelled).

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Claim 48 (Original): The computer-readable storage medium of claim 26, wherein the axis comprises a vertical axis through a center of the body.

Claim 49 (Original): The computer-readable storage medium of claim 26, wherein each of the body templates illustrates a view of the external surface of the human body rotated an angle about at least one of a plurality of axes.

Claim 50 (Original): A device comprising:

a display;

a memory that stores a body surface coordinate system that describes a plurality of points on an external surface of a human body; and

a processor to sequentially display a plurality of two-dimensional body templates via the display, each of the body templates illustrating a view of the external surface of the human body rotated an angle about an axis, receive input from a user indicating a region of one of the body templates, map the input to the body surface coordinate system, regenerate the body template to illustrate the indicated region on the template based on the body surface coordinate system with the mapped input, and display the regenerated body template via the display.

Claim 51 (Original): The device of claim 50, wherein the plurality of body templates comprises a front view template and a back view template.

Claim 52 (Original): The device of claim 50, wherein the plurality of body templates comprises a front view template, a right-side view template, a back view template, and a left-side view template.

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Claim 53 (Original): The device of claim 50,

wherein the regenerated body template is a first one of the body templates that illustrates a portion of the surface, and

wherein the processor generates a second one of the body templates to illustrate at least some of the portion of the surface illustrated by the first one of the body templates and at least a portion of the region indicated by the user based on the body surface coordinate system with the mapped input, and displays the second one of the body templates via the display.

Claim 54 (Currently Amended): The device of claim 50, further comprising a user input circuit, wherein the processor receives commands from a the user via the user input circuit, and sequentially displays the body templates via the display according to the commands.

Claim 55 (Original): The device of claim 54, wherein the display comprises the user input circuit, and the processor receives the commands from the user via the display.

Claim 56 (Original): The device of claim 54, wherein the processor displays at least one rotation direction arrow via the display for receiving the commands from the user.

Claim 57 (Cancelled).

Claim 58 (Currently Amended): The device of claim 50,

wherein the one of the body templates comprises a first one of the body templates, and

wherein the processor generates a second one of the body templates to illustrate a view of the external surface of the human body, the angle of rotation of the surface about the axis for the second one of the body templates based on the a proximity of the received body region indication to an edge of the first one of the body templates, and displays the second one of the body templates via the display.

Claim 59 (Cancelled).

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Claim 60 (Original): The device of claim 50, wherein the processor generates each of the body templates based on the body surface coordinate system.

Claim 61 (Original): The device of claim 50, wherein the body surface coordinate system comprises a three-dimensional coordinate system.

Claim 62 (Original): The device of claim 61, wherein the processor generates the three-dimensional coordinate system by applying one of a linear interpolation, a higher-order interpolation, or a spline technique to determine valid body coordinates.

Claim 63 (Original): The device of claim 50, wherein the body surface coordinate system comprises a two-dimensional coordinate system.

Claim 64 (Original): The device of claim 63, wherein the processor generates the two-dimensional coordinate system by mathematically peeling and flattening a representation of the external surface of the human body, and indicating continuity at edges of the body surface.

Claim 65 (Original): The device of claim 63, wherein the processor displays one of the body templates by projecting the two-dimensional coordinate system onto a three-dimensional frame representation of the external surface of the human body.

Claim 66 (Cancelled).

Claim 67 (Original): The device of claim 50, wherein the display comprises the user input circuit, and the processor receives the input via the display.

Claim 68 (Original): The device of claim 67, wherein the user interacts with the display using a stylus.

Claim 69 (Cancelled).

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Claim 70 (Original): The device of claim 50, wherein the device comprises a programming device to program a neurostimulation therapy device that provides electrical stimulation to a patient.

Claim 71 (Original): The device of claim 50, wherein the device comprises a handheld computing device.

Claims 72-123 (Cancelled).